

REMARKS

With the entry of this Amendment, claims 2-7 and 10-17 will be pending in this patent application. By the present Amendment, claims 3 and 7 have been amended, claims 8 and 9 have been canceled and claims 10-17 have been added. The amendments to the claims presented herein do not introduce new matter.

Allowable subject Matter

Applicant notes with appreciation the Examiner's recognition of allowable subject matter in formerly presented claims 8 and 9. By this Amendment, the limitations that had been presented in claim 8 have been incorporated into new independent claim 11, and the limitations that had been presented in claim 9 have been incorporated into independent claim 3 and new dependent claim 17.

Prior Art Rejection I

In the last Office Action, claims 2-3 were rejected under 35 USC § 103(a) as being unpatentable over US 6776723 B2 (Bliss et al.) in view of US 5348777 (Oonuki et al.), US 6623377 B2 (Evans et al.) and US 6582323 B2 (Soracco et al.). Applicant traverses this rejection insofar as it might be deemed applicable to any of claims 2, 3 and 10-13 as now presented.

Bliss et al. discloses a golf club head wherein weight members (226, 228 in Fig. 2) are positioned within the club head so as to lower the center of gravity of the club head and adjust the center of gravity toward and away from the club face as a function of the loft angle of the club head. As shown in Fig. 2 and described in column 3, lines 35-45, the orientation of the club face is determined through the use of a horizontal line *h* tangent to the club face at its center.

Applicant submits that the Examiner's characterization of the Bliss et al. disclosure (in the paragraph bridging pages 2-3 of the Office Action) is not clear and is at odds with what Bliss et al. discloses. For, example, what does the Examiner mean by 'a tangent line parallel to line "h"'? And, what is the disclosure in Bliss et al. from which the Examiner determines the position of the intersection of this "tangent line" with a line dropped from the sweet spot? Contrary to the

assertions of the Examiner, the Bliss et al. disclosure says nothing about the location of a point at which a line dropped from the sweet spot on the club face intersects the horizontal line that is tangent to the club face at its center.

The Examiner acknowledges that Bliss et al. does not disclose a club head having (1) the claimed shortest distance (d) between the shaft axis and the center of gravity G, (2) the claimed club head volume and (3) the claimed moments of inertia.

As a remedy for the deficiencies of the Bliss et al. disclosure vis-à-vis the requirements of the claims, the Examiner proposes modifications of the Bliss et al. club head whereby (1) the distance (d) is 47-48 mm, based on the incidental disclosure in Oonuki et al. of a distance of 20-50 mm separating the shaft axis and the center of gravity of the club head, (2) the head volume is 350 cm^3 , based on the disclosure in Evans et al. and (3) the moments of inertia about the "normal axis" and the axis parallel to both the horizontal and vertical planes are not less than $3400 \text{ g}\cdot\text{cm}^2$ and $2000 \text{ g}\cdot\text{cm}^2$, respectively, based on the disclosure in Soracco et al.

Applicant submits that the combination of the Bliss et al. and Oonuki et al. disclosures proposed by the Examiner would be in conflict with the explicit teachings of Bliss et al., which call for the position of the center of gravity to be adjusted based on the objective of lowering the center of gravity and adjusting the position of the center of gravity as a function of club face loft angle. As to the proposed combination of the Bliss et al. disclosure with the disclosures in Evans et al. and Soracco et al., there is no disclosure or suggestion in any of these three patents that a club head like the Bliss et al. club head would benefit from or accommodate the modifications that would be imposed by the combination of their disclosures as proposed by the Examiner.

By this Amendment, Applicant has amended independent claim 3 by adding the limitations that had been recited in claim 9 and by deleting the recitation of the moments of inertia; the moments of inertia that had been recited in claim 3 are now recited in dependent claim 10. Applicant has also added new independent claim 11, which is modeled after the earlier version of claim 3 and additionally includes the limitations that had been recited in claim 8, but does not include the recitation of the moments of inertia; the moments of inertia that had been recited in the earlier version of claim 3 are now recited in dependent claim 12. Applicant has also added dependent claim 13, which, like claim 2, recites the distance (d) as being 47-48 mm.

As acknowledged by the Examiner, the subject matter that had been recited in claims 8 and 9 is not disclosed or made obvious by the prior art of record.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Bliss et al., Oonuki et al., Evans et al. and Soracco et al. can properly serve as a basis for rejecting any of claims 2, 3 and 10-13 under 35 USC § 103(a).

Prior Art Rejection II

Claims 4-6 were rejected under 35 USC § 103(a) as being unpatentable over Bliss et al., Oonuki et al., Evans et al., Soracco et al. and US 6402639 B1 (Iwata et al.). Applicant traverses this rejection insofar as it might be deemed applicable to any of claims 4-6, 14 and 15 as now presented.

In this rejection, the Examiner relies upon Iwata et al. for the disclosure of a club head with a face having bulge and roll radii in the range of 254-356 mm and proposes modifying the club head resulting from the combined disclosures in Bliss et al., Oonuki et al., Evans et al. and Soracco et al. so that the face exhibits bulge and roll radii within this range. Without acquiescing in this further modification of a modified club head, Applicant observes that the limitations of former claim 9 are now present in the parent claim (3) of claims 4-6, and the limitations of former claim 8, are now present in the parent claim (11) of claims 14 and 15.

Again, Applicant points out that the Examiner has acknowledged that the subject matter that had been recited in claims 8 and 9 is not disclosed or made obvious by the prior art of record.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Bliss et al., Oonuki et al., Evans et al., Soracco et al. and Iwata et al. can properly serve as a basis for rejecting any of claims 4-6, 14 and 15 under 35 USC § 103(a).

Prior Art Rejection III

Claim 7 was rejected under 35 USC § 103(a) as being unpatentable over Bliss et al., Oonuki et al., Evans et al., Soracco et al. and US 6783466 B2 (Seki et al.). Applicant traverses this rejection insofar as it might be deemed applicable to claims 7 and 16 as now presented.

In this rejection, the Examiner relies upon Seki et al. for the disclosure of a club head with a main body composed of titanium alloy of Ti-6Al-4V and a face plate composed of titanium alloy of Ti-4.5Al-3V-2Mo-2Fe. The Examiner proposes modifying the club head resulting from the combined disclosures in Bliss et al., Oonuki et al., Evans et al. and Soracco et al. so that that the main body and the face plate are composed of the alloys used for these components in the Seki et al. club head. Without acquiescing in this further modification of a modified club head, Applicant observes that the limitations of former claim 9 are now present in the parent claim (3) of claim 7, and the limitations of former claim 8, are now present in the parent claim (11) of claim 16.

Again, Applicant points out that the Examiner has acknowledged that the subject matter that had been recited in claims 8 and 9 is not disclosed or made obvious by the prior art of record.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Bliss et al., Oonuki et al., Evans et al., Soracco et al. and Seki et al. can properly serve as a basis for rejecting either of claims 7 and 16 under 35 USC § 103(a).

Other Prior Art

Applicant has considered the other prior art cited by the Examiner. This prior art was not applied against the claims in this application and does not warrant further comment.

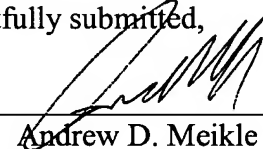
Conclusion

In view of the observations and arguments presented herein, Applicant respectfully requests that the Examiner reconsider and withdraw the rejections stated in the outstanding Office Action and recognize all of the pending claims as allowable.

If unresolved matters remain in this application, the Examiner is invited to contact Frederick R. Handren, Reg. No. 32,874, at the telephone number provided below, so that these matters can be resolved expeditiously.

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Respectfully submitted,

By 

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